XVI. Lessons Learned

The Great Flood of 1993 caused vast devastation throughout the 78,320 square mile Rock Island District and taught important lessons to all those flood-fighters involved, including Corps personnel. The historic flood is estimated at this time to have caused damages of more than $1 billion overall.

Despite the destruction caused by the Great Flood, further damages of an estimated $1.1 billion were prevented by the building, raising and strengthening of levees and other flood control projects and the operation of the three reservoirs in the district. This figure exceeds the total cost of all the flood control projects ever built in the district. **Many areas in the Rock Island District did not have updated stage-damage estimates to obtain accurate damage assessments. A systematic long-term plan needs to be developed to update and periodically revise the stage-damage relationships for all Corps projects.**

Over the years, protection from the ravages of flooding has been successfully provided for the more frequent, less severe events. But the 1993 Flood was unprecedented. It was of much greater magnitude and longer duration than previous floods. This event broke historical records in many areas and was even larger than the design flood for many of the structures.

Throughout the 1993 flood fight effort, the district area engineer organization was very effective in executing an array of emergency management and technical assistance tasks--both anticipated and unanticipated. The responsiveness of the area engineer organization required for an event of this magnitude is documented in the many letters of thanks from the communities affected by flooding.

Some of the media coverage of the 1993 Flood, especially analyses of flood causes by the print media, were inaccurate. The flood taught us the importance of responding to media inquiries and published stories with accurate, timely information. Responses should include explanations of the concepts involved in reservoir regulation plans, and operation and maintenance of Corps projects.

Funds for post flood data collection need to be approved promptly so that perishable data can be captured quickly and accurate measurements made. Policy and regulations should be clearly defined for funding eligibility for data collection and measurements to avoid delay and prevent confusion in future flood events. Information must be collected immediately following the event, including damage survey data (residential, commercial, industrial, agricultural, etc.), geotechnical data (levee performance) and hydraulic data (highwater profiles, rating curves and flow/stage frequency relationships). This valuable data becomes difficult to collect and measurement becomes less accurate as time goes by.